UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,185	03/11/2004	Steven A. Sunshine	018564-003630	8489

7590 12/23/2004

Foley & Lardner
Suite 500
3000 K Street, N.W.
Washington, DC 20007

EXAMINER	
TSAI, CAROL S W	

ART UNIT	PAPER NUMBER
2857	

DATE MAILED: 12/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/799,185	SUNSHINE ET AL.	
	Examiner	Art Unit	
	Carol S Tsai	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 November 2004* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *23-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *23-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 23-30 and 32-36 are rejected under 35 U.S.C. 102(b) as being anticipated by U. S. Patent No. 6,170,318 to Lewis.

With respect to claims 23-25, Lewis discloses a method for monitoring the progression of a plume of escaped dangerous gas, the method comprising: transmitting sensory data from a first sensor array comprising sensors capable of producing a first response in the presence of a chemical stimulus to a remote location (see col. 14, line 25 to col. 15, line 25 and col. 16, line 27 to col. 17, line 8); transmitting physical data from a second sensor array comprising sensors capable of producing a second response in the presence of a physical stimulus to a remote location, wherein said physical data is generated by a sensor of said second sensor array selected from the group consisting of an optical sensor, a mechanical sensor, a radiation sensor, a thermal sensor and combinations thereof (see col. 9, line 64 to col. 10, line 67 and col. 18, line 54 to col. 19, line 33); and processing the sensory and physical data at the remote location, thus monitoring the progression of the plume (see col.17, lines 27-40).

As to claim 26, Lewis also discloses a sensor selection algorithm to determine sensors in the first array (see col. 13, lines 31-33).

As to claim 27, Lewis also discloses selecting each sensor of the first sensor array from the group consisting of a bulk conducting polymer film, a semiconducting polymer sensor, a surface acoustic wave device, a fiber optic micromirror, a quartz crystal microbalance, a conducting/nonconducting regions sensor, a dye impregnated polymeric coatings on optical fiber and combinations (see col. 3, lines 56-67 and col. 6, line 67 to col. 7, line 33).

As to claims 28, 30, and 34-36, Lewis also discloses monitoring a leakage of volatile gases (see col. 19, lines 9-23).

As to claim 29, Lewis also discloses monitoring emission levels (see col. 18, lines 54-60).

As to claims 32 and 33, Lewis also discloses monitoring gases selected from the group consisting of ambient air, combustible gases, natural gas, hazardous leaks, illegal substances, natural gas, smoke, anesthesia gas, sterilization gas, and combinations thereof (see col. 19, lines 9-23).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis in view of U. S. Patent No. 6,252,510 to Dungan.

As noted above, Lewis discloses the claimed invention, except for monitoring the perimeter.

Dungan teaches monitoring the perimeter (see col. 3, lines 41-46).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Lewis's method to include monitoring the perimeter, as taught by Dungan, in order that automotive gasoline and diesel engines as well as industrial combustion processes such as power plant emissions can be monitored.

Response to Arguments

6. Applicant's arguments filed November 08, 2004 have been fully considered but they are not persuasive.

Applicants argue that the cited passages (see col. 9, line 64 to col. 10, line 67 and col. 18, line 54 to col. 19, line 33) only disclose chemical sensors, that specifically, these are sensors that detect the presence of chemical substances by interacting with the chemicals directly to produce a change in the sensor, for example, a resistance change results from contact with an analyte fluid (see Lewis, column 12, lines 38-49). The Examiner disagrees with Applicants. As set forth above in the art rejection, Lewis does disclose a method using a sensor that is selected from the group consisting of an optical sensor, a mechanical sensor, a radiation sensor, a thermal sensor and combinations thereof (see col. 9, line 64 to col. 10, line 67 and col. 18, line 54 to col. 19, line 33; The air quality sensor would function in a manner similar to a thermostat. Recirculation, oxygen and carbon dioxide levels could be continuously monitored and adjusted, just as **temperature is currently monitored and adjusted using a thermostat**. Another example of

an environmental monitoring application is in the passenger cabins of automobiles and airplanes, or other small self-contained environments. In particular, **a sensor that detects atmospheric vapors such as humidity,** carbon monoxide, and oxygen, in combination with a sensor that detects noxious or unpleasant vapors and a recirculation/fresh air control device, depending on the indoor/outdoor air quality, is an example of an embodiment useful for automobiles or other enclosed spaces).

Applicants argue that combining Lewis with a disclosure of monitoring a perimeter would not yield the present invention, because Lewis fails to disclose an optical sensor, a mechanical sensor, a radiation sensor, or a thermal sensor. The Examiner disagrees with Applicants. As set forth above in the Response to arguments, Lewis does disclose an optical sensor, a mechanical sensor, a radiation sensor, or a thermal sensor (see col. 9, line 64 to col. 10, line 67 and col. 18, line 54 to col. 19, line 33; The air quality sensor would function in a manner similar to a thermostat. Recirculation, oxygen and carbon dioxide levels could be continuously monitored and adjusted, just as **temperature is currently monitored and adjusted using a thermostat**. Another example of an environmental monitoring application is in the passenger cabins of automobiles and airplanes, or other small self-contained environments. In particular, **a sensor that detects atmospheric vapors such as humidity**, carbon monoxide, and oxygen, in combination with a sensor that detects noxious or unpleasant vapors and a recirculation/fresh air control device, depending on the indoor/outdoor air quality, is an example of an embodiment useful for automobiles or other enclosed spaces). Lewis discloses the claimed invention except for monitoring the perimeter. Dungan teaches monitoring the perimeter (see col. 3, lines 41-46), in order that automotive gasoline and diesel engines as well as industrial combustion processes

such as power plant emissions can be monitored. Therefore, the combination Lewis and Dungan clearly teach the claimed invention.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carol S. W. Tsai whose telephone number is (571) 272-2224. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (571) 272-2216. The fax number for TC 2800 is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be

directed to the TC 2800 receptionist whose telephone number is (571) 272-1585 or (571) 272-2800.

In order to reduce pendency and avoid potential delays, Group 2800 is encouraging FAXing of responses to Office actions directly into the Group at (703) 872-9306. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account. Please identify the examiner and art unit at the top of your cover sheet. Papers submitted via FAX into Group 2800 will be promptly forwarded to the examiner.

Carol S. W. Tsai
Patent Examiner
Art Unit 2857

12/17/04